

X, Nic
U.S. Serial No. 10/089,907
Page 2 of 5

Amendments to the claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of claims:

Claims 1-12 (canceled)

Claim 13 (currently amended): Processor system,

with a processor unit for executing instructions filed in a program memory,

whereby the processor unit comprises instruction read out means for reading out an instruction from the program memory, and instruction decoding means for decoding the instruction, and instruction executing means for executing the instruction,

whereby the instruction executing means comprise a plurality of executing units operable in parallel for parallel execution of various instructions, and the instruction read out means and the instruction decoding means are jointly provided for all executing units,

~~whereby a first executing unit of the instruction executing means is connected to a first databus and a second executing unit is connected to a second databus whereby the transmission rate of the first databus is lower than the transmission rate of the second databus, and~~

whereby ~~the a~~ first executing unit of the ~~instruction executing means~~ plurality of executing units is designed to execute all ~~types of~~ instructions of a set of instructions of the processor system, while ~~the a~~ second executing unit of the plurality of executing units is designed to execute only ~~one a few~~ special type of instructions of the instruction set of the processor system, and

whereby the processor unit is designed in such a way that a path leading to the first executing unit is temporarily deactivated by the instruction read out means via the instructions decoding means, if momentarily no instruction has to be executed by the first executing unit.

X. Nie
U.S. Serial No. 10/089,907
Page 3 of 5

Claim 14 (previously presented): Processor system according to claim 13, wherein temporary storage means for storing information required for executing the instruction to be carried out by the particular executing unit are associated with each executing unit.

Claims 15-16 (canceled)

Claim 17 (previously presented): Processor system according to claim 13, wherein the second executing unit is designed to execute only an instruction to move a data block.

Claim 18 (previously presented): Processor system according to claim 14 wherein information stored in the temporary storage means associated with the second executing unit comprises a storage or loading address of the datablock to be stored or loaded, the amount of data elements of the datablock to be moved, an offset value, with which the datablock has to be stored or read and/or control information, which specifies whether the instruction to be carried out concerns a storage or read instruction.

Claim 19 (canceled)

Claim 20 (previously presented): Processor system according to claim 13 wherein the processor system is intended for processing telecommunications protocols, and the first databus is intended for processing header data of the telecommunications protocols, while the second databus is intended for fast transfer of payload data.

Claims 21-24 (canceled)

Claim 25 (new): Processor system according to claim 13, wherein the first executing unit is connected to a first databus, and the second executing unit is connected to a second databus, whereby the transmission rate of the first databus is lower than the transmission rate of the second databus.

X. Nie
U.S. Serial No. 10/089,907
Page 4 of 5

Claim 26 (new): Processor system according to claim 25, wherein a data memory of the processor system is connected to the first databus, and at least one input and/or output port and/or at least one register or buffer is connected to the second databus.

Claim 27 (new): Processor system according to claim 26, wherein the input and/or output port connected to the second databus is connected to a transmitter and/or receiver unit of a communication transmitter, and the register or buffer connected to the second databus is provided for temporary storage of a bitstream to be transmitted or received by the communication transmitter.

Claim 28 (new): Processor system according to claim 25, wherein the executing unit of the instruction executing means connected to the first databus corresponds to the first executing unit and the executing unit connected to the second databus corresponds to the second executing unit.

Claim 29 (new): Processor system according to claim 28, wherein the first executing unit is also connected to the second databus, so that it can also access the second databus, while the second executing unit is only connected to the second databus.

Claim 30 (new): Processor system according to claim 13, wherein the second executing unit is designed to execute only one type of the special instructions.